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# Catalogue of Indian Insects

## PART 3—Bombyliidae

FIELD MUSEUM OF NATURAL HISTORY

AUG 18, 1969

## R. SENIOR-WHITE

F.E.S.,

(Malariologist, the Kepitigalla Rubber Estates L,td., Ceylon.)



Issued under the authority of the Government of India.

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BY

## R. SENIOR-WHITE,

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E.W. Clarry

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## Catalogue of Indian Insects.

## Part 3.—BOMBYLIIDÆ.

#### BOMBYLIIDÆ.

General account: Howlett, Ind. Ins. L., 597-600, figs.; Will., Dipt. N. Amer., 210-213, figs.; Brun., F. I. Dipt. Brachy. I, 173-174 [characterized]; Verrall, Br. Flies, V, 474-478 [general account and systematic order of general: Brun., R. I. M., II, 437-492 [revised cat. of Oriental spp.]; Villen., Ann. S. Ent. Fr. 1905, 304-306 [Meigen's types in Paris Mus.].

## BOMBYLINÆ.

Verrall, Br. Flies, V, 483; Brun., F. I. Dipt. Brachy. I, 259.

## 1. Empidideicus, Becker.

Empidideicus, Beck., Zeit. f. Hym. u. Dipt., VII, 97, fig. (1907), [Genotype, E. carthaginensis, Beck.]; Verr., Br. Flies, V, 484, fig. 272; Brun., F. I. Dipt. Brachy. I, 260.

## indicus. Brunetti.

Empidideicus indicus, Brun., R. I. M., <sup>1, 2</sup> Simla. XIII, 77, fig. 1 (1917)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 260<sup>2</sup>.

## 2. Geron, Meigen.

Geron, Mg., Syst. Besch., II, 223, (1829) [Genotype, Bombylius hybridus, Mg.]; Sch., F. Aust., I, 68; Coq., Tr. Arrer. Ent. Soc., XXI; Mik, Wien. Ent. Zeit., XIV, 106 [parasitic on Pyralid larva]; Ald., Cat. N. Amer. Dipt., 245; Wulp, Cat. Dipt. S. Asia, 75; Kert., Cat. Dipt., V, 98; Brun., R. I. M., II, 459; *id.*, F. I. Dipt. Brachy. I, 279.

## albescens, Brunetti.

Geron albescens Brun., R. I. M., III, 229 1, 2 Orissa.
 (1909)<sup>1</sup>; id. F. I. Dipt. Brachy. I, 2 Satara.
 280, figs. 17, 18<sup>2</sup>. Abbottabad.

## argentifrons, Brunetti.

Geron argentifrons, Brun., R. I. M., II, 1. 2 Lahore. 459 (1909)<sup>1</sup>; id. F. I. Dipt. Brachy. 1. 2 Bombay. I, 279<sup>2</sup>; Howl., Ind. Ins. L., 598 1. 2 Pusa. [parasite of Laspeyresia]. 2 Almora. 2 Ceylon.

## 3. Usia, Latreille.

Usia, Latr., H. N. Crust. Ins., III, 430 (1802)
 [Genotype, Volucella florea, Fb.];
 id., loc. cit., XIV, 300; Kert., Cat.
 Dipt., V, 100; Brun., F. I. Dipt.
 Brachy. I, 281.

Volucella, Fb., (nec Geoff.), Ent. Syst., IV, 412, (1794); id., Syst. Antl., 114; Mg., Klass., I, 194.

#### marginata, Brunetti.

Usia marginata, Brun., R. I. M., III, 228 <sup>1</sup>, <sup>2</sup> Simla. (1909)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 283<sup>2</sup>.

#### sedophila, Brunetti.

Usia sedophila, Brun., R. I. M., III, 228 <sup>1</sup>, <sup>2</sup> Simla. (1909)<sup>1</sup>; id., F. I. Dipt. Brachy. I, <sup>2</sup> Phagu. 282, fig. 19.<sup>2</sup>

#### 4. Phthiria, Meigen.

Phthiria, Mg., Illig. Mag., II, 268 (1803) [Genotype, Bombylius pulicarius Mikan]; Sch. F. Aust. I, 66; Coq. Trans. Amer. Ent. Soc., XXI, 66; Will., Biologia, Dipt. I, 288; Ald., Cat. N. Amer. Dipt., 239; Wulp, Cat. Dipt. S. Asia, 75; Kert., Cat. Dipt., V, 112; Verr., Br. Flies, V, 487; Brun., R. I. M., II, 459; id., F. I. Dipt. Brachy. I, 284.

Cyclorhynchus, Mq., H. N. Dipt., I, 392 (1834); id., Dipt. Exot., II, (1) 114.

Dasypalpus, Mq., Dipt. Exot., II, (1) 112 (1840).

Megapalpus, Mq., H. N. Dipt., I, 394 (1834).

Phtyria, Rond., Arch. Zool. Modena, III, 56 (1863).

Poocilognathus, Jaenn., Abh. Senck. Nat. Ges., VI, 350 (1863); id., N. Exot. Dipt., 43.

## gracilis. Walker.

Phthiria gracilis, Wlk., Dipt. Saund., 184 (1852)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia, 75<sup>2</sup>; Kert., Cat. Dipt., V, 113<sup>3</sup>; Brun., R. I. M., II, 4594; id., F. I. Dipt. Brachy. I, 285, fig. 205.

## 5. Systoechus, Loew.

Systoechus, Lw., Neue Beitr., III, 34 (1855) [Genotype, Bombylius sulphureus, Mik.]; Kert., Cat. Dipt., V, 120; Wulp, Cat. Dipt. S. Asia, 74; O. S., W. Dipt., 250; Ald., Cat. N. Amer. Dipt., 237; Brun., R. I. M., II, 458; id., F. I. Dipt. Brachy. I, 275, fig. 16.

#### eupogonatus, Bigot.

Systoechus eupogonatus, Big., Ann. S. 2, 3,4, 5 Hindostan. Ent. Fr., (7) II, 365 (1892); Wulp, <sup>3</sup> Ceylon. Cat. Dipt. S. Asia, 742; Kert., Cat. Dipt., V, 1213; Brun., R. I. M., II, 4584; id., F. I. Dipt. Brachy. I, 2785.

2, 3, 4 E. India.

<sup>5</sup> Simla.

## flavospinosus, Brunetti.

Systoechus flavospinosus, Brun., F. I. 1S. Shan States. Dipt. Brachy. I, 277 (1920)1.

## nivalis, Brunetti.

Systoechus nivalis, Brun., R. I. M., VII, 1, 2 Kumaon. 472 (1912)1; id., F. I. Dipt. Brachy. I, 2772.

## socius, Walker.

Bombylius socius, Wlk., Dipt. Saund., I, 201 (1852)1; Wulp, Cat. Dipt. S. Asia, 742; Kert., Cat. Dipt., V, 143.3 Systoechus socius, Brun., R. I. M., II, 4584; id., loc. cit., III, 2265; id., F. I. Dipt. Brachy. I, 2766.

2, 3 E. India.

<sup>4</sup> Masuri.

5, 6 Simla District.

6 Kashmir. Abbottabad.

<sup>6</sup> Dehra Dun.

6 Kumaon.

6 Sikkim.

<sup>6</sup> Kangra Valley. Mohanpur (Bengal). Nilgiris.

6 Coimbatore.

6 Bellary District,

#### 6. Anastoechus, Osten-Sacken.

Anastoechus, O. S., W. Dipt., 251 (1877) [Genotype, Bombylius nitidulus F., as barbatus, O-S.]; Ald., Cat. N. Amer. Dipt., 237; Kert., Cat. Dipt., V, 124; Wulp, Cat. Dipt. S. Asia, 74; Brun., R. I. M., II, 458; id., F. I. Dipt. Brachy. I, 278.

## longirostris, van der Wulp.

Anastoechus longirostris, Wulp, Leyd. 2, 3, 4, 5 Himalaya. Mus. Notes, VII, 85 (1885)1; id., Cat. Dipt. S. Asia, 742; Kert., Cat. Dipt., V, 1244; Brun., R. I. M., II, 4584; id., F. I. Dipt. Brachy. I, 2785.

## 7. Bombylius, Linnaeus.

Bombylius, L., Syst. Nat., edn. X, 606 (1758) [Genotype, B. major, L.]; id., F. Suec., 1918; Latr., H. N. Crust. Ins. III, 429; id., loc. cit., XIV, 298; Fb., Syst. Antl., 128; Mg., Syst. Besch., II, 141; Mq. H. N. Dipt. I 377; Sch., F. Aust., I, 58; O-S., W. Dipt., 247; Ald., Cat. N. Amer. Dipt., 235; Wulp, Cat. Dipt. S. Asia, 73; Kert., Cat. Dipt., V, 125; Verr., Br. Flies, V, 491; Brun., R. I. M., II, 456; id., F. I. Dipt. Brachy. I, 261.

Choristus, Wlk., Dipt. Saund., I, 196, (1852).

Parisus, Wlk., Dipt. Saund., I, 197, (1852).

## albosparsus. Bigot.

Bombylius albosparsus, Big., Ann. S. Ent. Fr., (7) II, 362 (1892)1; Wulp, Cat. Dipt. S. Asia, 742; Kert., Cat. Dipt., V, 1253; Brun., R. I. M., II, 4574; id., F. I. Dipt. Brachy. I, 2705.

2, 3, 4, 5 Pondicherry.

## brunettii, Senior-White.

Bombylius brunettii, S.-W., Spol. Zeyl., XII, 203 (1922)1.

<sup>1</sup> Matale. 1 Opalgalla. 1 Habarana.

<sup>1</sup> Kanthalai. <sup>1</sup> Trincomali. (All Ceylon.)

#### comastes, Brunetti.

Bombylius comastes, Brun., R. I. M., III, 225 (1909)1; id., F. I. Dipt. Brachy. I., 2682.

<sup>1</sup> Trivandrum.

<sup>2</sup> Bombay Presidency. Tanjore. Samalkota.

#### erectus, Brunetti.

Bembylius erectus, Brun., R. I. M., II, 1, 2 Bangalore. 457. 480, t. 12, f. 27 (1909)1; id., F. I. Dipt. Brachy. I, 2672

## fulvipes, Bigot.

Bombylius fulvipes, Big., Ann. S. Ent. Fr., (7) II, 362 (1892); Wulp, Cat. Dipt. S. Asia, 74<sup>2</sup>; Kert., Cat. Dipt., V, 132<sup>3</sup>; Brun., R. I. M., II, 457, 479<sup>4</sup> [redescr.]; id., F. I. Dipt. Brachy. I, 271<sup>5</sup>.

2, 3, 4 Pondicherry.

<sup>4</sup>, <sup>5</sup> Allahabad.

<sup>5</sup> Belgaum.

<sup>5</sup> Lahore. <sup>5</sup> N. Kanara.

#### maculatus, Fabricius.

Bombylius maculatus, Fb., Syst, Ent., 803, 6 (1775); Wd., Auss. Zweifl. Ins., I, 342, 19; Wulp, Cat. Dipt. S. Asia, 73<sup>2</sup>; Kert., Cat. Dipt. V, 134<sup>3</sup>; Brun., R. I. M., II, 456; id., F. I. Dipt. Brachy. I, 267<sup>5</sup>.

## <sup>2</sup>, <sup>4</sup> Tranquebar.

<sup>5</sup> Orissa.

<sup>5</sup> Bellary.

<sup>5</sup> Coimbatore.

Trichinopoly District.

<sup>3</sup> S. Asia.

## major, Linnaeus.

Bombylius major, L., Syst. Nat. edn. X, 606 (1758)1; id., F. Suec., 1918; id., Syst. Nat. edn. XII, 11, 1009; Fb., Spec. Ins., II, 472; id., Ent. Syst., IV, 407; id., Syst. Antl., 128; Gmel., Syst. Nat., V, 2902; Mg., Syst. Besch., II, 144 [bibliog.]; Mq., H. N. Dipt., I, 377; Zett., Dipt. Scand., I, 188; Sch., F. Austr., I, 60; Kirby, F. Bor.-Amer., Ins., 312; id., Can. Ent., XIII, 166; Lw., Neue Beitr., III, 14 [notes]; O.-S., W. Dipt., 248; Coq., Tr. Amer. Ent. Soc., XXI, 110; Ald., Cat. N. Amer. Dipt., 236; Verr., Br. Flies, V, 497, fig. 290; Kert., Cat. Dipt., V, 1342; Brun., R. I. M., I, 1683; id., loc. cit., II, 4574; id., F. I. Dipt. Brachy. I, 2655.

Bombylius albipectus, Mq., Dipt. Exot., supp. V, 82, t. 4, f. 10 (?1846).

Bombylius fratellus, Wd., Auss. Zweifl. Ins., I, 583 (1828).

Bombylius sinuatus, Mg., Klass., 179 (1800); Mik, Monog. Bombyl. Bohem, 35, t. 2, f. 4.

<sup>2</sup>, <sup>3</sup>, <sup>4</sup>, <sup>5</sup> Simla District. Murree Hills.

<sup>2</sup> N. America.

<sup>2</sup> Europe.

<sup>2</sup> N. Africa.

<sup>2</sup> Japan.

Bombylius variegatus, de Geer, Mem. H. N. Ins., VI, 107, t. 14, f. 10 (1782). Bombylius vicinus, Mq., Dipt. Exot., II, i, 98 (1840).

## orientalis, Macquart.

Bombylius orientalis, Mq., Dipt. Exot., II, i, 90, t. 6, f. 2 (1840)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia 742; Kert., Cat. Dipt., V. 1393; Brun., R. I. M., II, 4564; id., F. I. Dipt. Brachy. I, 2635, fig. 14; Howl., Ind. Ins. L., t. 63, f. 1.

Bombylius tricolor, Guer., Icon. Regne Anim., III, 538, t. 95 (1828-1838); Wulp, Cat. Dipt. S. Asia, 746; Kert., Cat. Dipt., V, 1447.

3, 7, 4, 5 Bengal.

4, 5 Bangalore.

<sup>5</sup> Coorg.

<sup>5</sup> Cawnpore.

<sup>5</sup> Karikkupam.

<sup>5</sup> Dehra Dun.

<sup>5</sup> Bellary District.

Palamau.

Chapra.

<sup>2</sup>, <sup>3</sup> E. India.

## propinquus, Brunetti.

Bombylius propinguus, Brun., R. I. M., III, 226 (1909)<sup>1</sup>; id., Spol. Zeyl., VI, 171<sup>2</sup>; id., F. I. Dipt. Brachy., I, 272<sup>3</sup>.

## 1, 2, 3 Ceylon.

## pseudoterminalis, nom. nov.

Bombylius vicinus, Brun. [nec. Mq.], R. I. M., II, 457, 480 (1909)<sup>1</sup>; id., loc. cit., III, 2262; id., F. I. Dipt. Brachy. I, 2703.

## <sup>1</sup>, <sup>3</sup> Allahabad. <sup>2</sup> Nepal Terai.

#### terminalis, Brunetti.

Bombylius terminalis, Brun., R. I. M., 1, 2 Allahabad. II, 457, 479 (1909)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 2702.

## <sup>2</sup> Lahore.

#### wulpii, Brunetti.

Bombylius pulchellus, Wulp [nec. Lw.], Tijd. v. Ent. XXIII, 164, t. 10, f. 8 (1880)<sup>1</sup>; id., Leyd. Mus. Notes, VII,

Comastes pulchellus, Wulp, Cat. Dipt. S. Asia, 742.

3, 4, 5, 6, 7 Ceylon.

<sup>5</sup> Tenmalai.

<sup>7</sup> Dehra Dun.

<sup>7</sup> Bellary District.

<sup>7</sup> Orissa.

<sup>7</sup> N. Kanara.

<sup>6</sup> Java.

Eucharimyia pulchellus, Kert., Cat. Dipt. V, 1473.

Eucharimyia dives, Big., Ann. S. Ent. Fr., (6) VIII, Bull. p. cxl. (1888); Wulp, Cat. Dipt. S. Asia, 734.

Bombylius scintillans, Brun., R. I. M., III, 224 (1909)<sup>8</sup>.

Bombylius wulpii, Brun., R. I. I., II, 457 (1909)<sup>5</sup>; id., loc. cit., III, 226<sup>6</sup>; id., F. I. Dipt. Brachy. I, 264<sup>7</sup>.

7, 8 Travancore.

7 Cochin State.

7 Coimbatore District.

<sup>7</sup> Upper Burma.

2, 3, 5 Java.

## 8. Dischistus, Loew.

Dischistus, Lw., Neue Beitr., III, 45, (1855)
[Genotype, Bon bylius minimus, Schrk.]; Kert., Cat. Dipt., V, 116;
Brun., F. I. Dipt. Brachy. I, 273.

Bombylisoma, Rend., Dipt. Ital. Prodr.,
 i, 164 (1856) [nec. id., Arch. Zool.
 Modena, III, 67 (1863)].

Bombylosoma, Marschall, Nomencl. Zool., 323 (1873).

Bombyliosoma, Verr. apud Scudder, Nomencl. Zool., 47 (1882).

#### ardens, Walker.

Bombylius ardens, Wlk., List Dipt. B. M., II, 284 (1849)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia, 74<sup>2</sup>; Kert., Cat. Dipt., V, 126<sup>3</sup>. Systoechus ardens, Brun., R. I. M., II,

Dischistus ardens, Brun., F. I. Dipt. Brachy. I, 2754.

## 2, 3, 4 E. India.

## resplendens, Brunetti.

Dischistus resplendens, Brun., R. I. M., II, 458, 481 (1909)<sup>1</sup>; id., loc. cit., III, 226; id., F. I. Dipt. Brachy, I, 273, fig. 15<sup>3</sup>,

1, 2, 3 Simla Hills.
1, 3 Nepal.
1, 3 Naini Tal.
1, 3 Assam.
3 Dehra Dun.

3 Ceylon, E. Prov.

#### LOMATINÆ.

Verrall, Br. Flies, V, 506; Brun., F. I. Dipt. Brachy. I, 255.

## 9. Aphoebantus, Loew.

Aphaebantus, I.w., Cent., X, 39, (1872)
[Genotype, A. cervinus, Lw.]; O.-S.,
Biologia, I, 143-146; Coq., Can. Ent.,
XVIII, 84; id., Trans. Amer. Ent.
Soc., XXI, 104; id., W. Amer. Sci.,
1891, 256; Will., Biologia, I, 285,
[notes]; Ald., Cat. N. Amer. Dipt.,
242; Brun., F. I. Dipt. Brachy. I,
256.

Triodites, O.-S., Bull. U. S. Geol. Surv., IH, 245 (1877).

## ceylonicus, Brunetti.

Argyramoeba ceylonica, Brun., R. I. M., II, 450, 471, t. 12, f. 24 (1909)<sup>1</sup>; id., Spol. Zeyl., VI, 171<sup>2</sup>.

Aphoebantus ceylonicus, Brun. F. I. Dipt. Brachy. I, 257<sup>3</sup>.

1, 2, 3 Ceylon.

1 Trivandrum.

1, 3 Pusa.

<sup>3</sup> Darjiling District.

<sup>3</sup> Allahabad.

<sup>3</sup> Chapra.

Abbottabad.

#### TO XOPHORINÆ.

Verr., Br. Flies, V, 509; Brun., F. I. Dipt. Brachy. I, 286.

## 10. Toxophora Meigen.

Toxophora, Mg., Illig. Mag., II, 270, (1803)
[Genotype, Asilus maculatus, Rossi];
id., Klass., 1804; id., Syst. Besch.,
II, 178; Sch., F. Austr., I, 69; Coq.,
Entomol. Amer., I, 1886, 221; id.,
W. Amer. Sci. 1891, 199; Glover,
Entomol. Rpt., 1866, 45 [reared from

Eumenes nest]; id., loc. cit., 1870, 78; id., loc. cit., 1877, 105, [preying on Bembex]; Wulp, Cat. Dipt. S. Asia, 74; Kert., Cat. Dipt., V, 91; Brun., R. I. M., II, 458; id., F. I. Dipt. Brachy. I, 287.

## javana, Wiedemann.

Toxophora javana, Wd., Dipt. Exot., 179 (1821); id., Auss. Zweifl. Ins., I, 4 Allahabad. 363; Mq., Suit. à Buff., 387, 2; Wulp, 4 Madras. Cat. Dipt. S. Asia, 741; Meij., Tijd. v. Ent., LIII, 66; Brun., R. I. M., II, 458, t. 12 f. 283; id., F. I. Dipt. 2, 4 Java. Brachy. I, 287, t. 3 f. 164.

#### SYSTROPINÆ.

Verr., Br. Flies, V, 513; Brun., F. I. Dipt. Brachy. I, 289.

#### 11. Systropus, Wiedemann.

Systropus, Wd., Nov. Gen. Dipt., 18, (1829)
[Genotype, S. macilentus, Wd.]; id.,
Auss. Zweifl. Ins., I, 359; Mq., H. N.
Dipt., I, 391; O.-S., Biologia, I, 157
[notes]; Towns., Trans. Amer. Ent.
Soc., XXVII, 160; Will., Biologia,
I, 292; Ald., Cat. N. Amer. Dipt., 244;
Wulp, Cat. Dipt. S. Asia, 74; Kert.,
Cat. Dipt., V, 93; Brun., R. I. M., II,
459; id., F. I. Dipt. Brachy. I, 289.

Cephenus, Latr., Fam. Nat., 496 (1825); Karsch, Zeit. Berl. Ent. Ges., LIII, 657; Wandoll., Ent. Nacht., XXIII,

Xystropus, Verr. apud Scudder, Nomencl., 355 (1882); Verr., Br. Flies, V. 514. [note].

## edwardsi, Brunetti.

Systropus edwardsi, Brun., F. I. Dipt. <sup>1</sup> Burma. Brachy. 1, 294 (1920)<sup>1</sup>.

## eumenoides, Westwood.

Systropus eumenoides, Wstwd., Guérin <sup>2</sup>, <sup>3</sup>, <sup>4</sup> Ind. Or. Mag. Zool., 1842, 4, t. 90 (1842)<sup>1</sup>; id., <sup>5</sup> N. India. Trans. Ent. Soc., Lon., 1876, 575, t. 10, ff. 13-15; Wulp, Cat. Dipt. S. Asia, 74<sup>2</sup>; Kert., Cat. Dipt., V, 94<sup>3</sup>; Brun., R. I. M., II, 459<sup>4</sup>; id., F. I. Dipt. Brachy. I, 294<sup>5</sup>.

## flavipleura, Brunetti.

Inset 5 year Systropus flavipleura, Brun., Lebong. F. I. Dipt. Brachy., I, 295 (1920)<sup>1</sup>.

<sup>1</sup> Sikkim.

<sup>1</sup> Khasis.
Shillong.

## ophioneus, Westwood.

Systropus ophionius, Wstwd., Trans.
Ent. Soc., Lon., V, 233, t. 23, f. 6
(1849)<sup>1</sup>; id., loc. cit., 1876, 574; Wulp,
Cat. Dipt. S. Asia, 74<sup>2</sup>; Kert., Cat.
Dipt., V, 95<sup>3</sup>; Brun., R. I. M., II, 459<sup>4</sup>;
id., F. I. Dipt. Brachy. I, 291, fig. 21<sup>5</sup>.
Systropus nigricaudus, Brun., R. I. M.,
II, 460, 483, (1909)<sup>6</sup>.

#### ANTHRACINÆ.

Verr., Br. Flies, V, 515; Brun., F. I. Dipt. Brachy. I, 176-178 [tab. genera].

### 12. Anthrax, Scopoli.

Anthrax, Scop., Ent. Carn., 358, (1763) [Genotype, A. morio, Fb.]; Fb., Syst. Antl., 118, (1805); Mg., Syst. Besch., II, 107; Sch. F. Austr., I, 48; Coq., Trans. Amer. Ent. Soc., XIV 159; id., loc. cit., XIX, 170; id., loc. cit., XXI, 97; Ald., Cat. Dipt. N. Amer., 228; O.-S., Biologia, I, 111-140 [subgenera]; Wulp, Cat. Dipt. S. Asia, 71; Kert., Cat. Dipt., V, 25; Verr., Br. Flies, V, 518; Brun., R. I. M., II, 451-456; id., F. I. Dipt. Brachy. I, 234-236.

Aspiloptera, Kunckel, Bull. Soc. Fr. Belg. XXXIX, 145 [note] (1905).

Chrysanthrax, O.-S., Biologia, 121 (1886).

Dipalta, O.-S., Bull. U. S. Geol. Surv., III,

236 (1877); Coq., Can. Ent., 1886,

157; id., Trans. Amer. Ent. Soc.,

XIV, 159; id., loc. cit., XIX, 169;

Will., Biologia, I, 275; Ald., Cat. N.

Amer., Dipt., 227.

Hemipenthes, Lw., Berl. Ent. Zeit., XIII, 28 [note] (1869).

Hyalanthrax, O.-S., Biologia, 134 (1877). Isopenthes, O.-S., Biologia, 80, 96 (1886). ?Paranthrax, Big., Bull. Soc. Ent. Fr., (5) VI, lxvi (1876).

Poecilanthrax, O.-S., Biologia, 119 (1886). Stonyx, O.-S., Biologia, 80, 94 (1886). Thyridanthrax, O.-S., Biologia, 123 (1886). Villa, Lioy, Atti. Istit. Veneto, (3) IX, 732 (1864).

## afra, Fabricius.

Anthrax afra, Fb., Ent. Syst., IV, 258 (1794); id., Syst. Antl., 122, 15; Sch., F. Austr., I 50; Wulp. Cat. Dipt. S. Asia, 71<sup>2</sup>; Kert., Cat. Dipt., V, 27<sup>3</sup>; Brun., R. I. M., II, 451<sup>4</sup>; id., loc. cit., III, 222<sup>5</sup>; id., F. I. Dipt. Brachy. I, 240<sup>6</sup>.

Anthrax fimbriata, Mg., Klass., I, 205, (1804); id., Syst. Besch., II, 154, t. 17,

<sup>2</sup>, <sup>3</sup> E. India.

<sup>4</sup> Jubbulpore.

4 Poona.

4, 6 Meerut.
4 Jhansi.

4, 6 L. Burma.

4, 6 Orissa.

4, 5, 6 Gonda, U. P.

4, Allahabad.

f. 13; Mq., Suit. à Buff., I, 405, 16; id., Dipt. Exot., II, 162, 18.

- 4, 6 N. Bihar.
- 6 Dehra Dun.
- 6 Anamalais.
- <sup>6</sup> Satara District.
- 6 Madhupur.
- <sup>6</sup> Ferozepore.
- 6 Madras.
- 6 Trincomali.
- 6 Andamans.

## albofulva, Walker.

Anthrax albofulva, Wlk., Dipt. Saund., (3) 182 (1852); Wulp, Cat. Dipt. S. Asia, 72<sup>2</sup>; Kert., Cat. Dipt., V, 28<sup>3</sup>; Brun., R. I. M., II, 454<sup>4</sup>; id., F. I. Dipt. Brachy. I, 251.

- 2, 3 E. India.
- 4 Muttra.
- 4 Meerut.
- 4 Ferozepore.
- 4 Allahabad.

## aperta, Walker.

Anthraxaperta, Wlk., Dipt. Saund., I, 180 (1852); Wulp, Cat. Dipt. S. Asia, 72<sup>2</sup>; Kert., Cat. Dipt., V, 29<sup>3</sup>; Brun., R. I. M., II, 453, 475<sup>4</sup> [redeser.]; id., loc. cit., III, 223<sup>5</sup>; id., F. I. Dipt. Brachy. I, 245<sup>6</sup>.

Argyramoeba aperta, Howl., Ind. Ins. L., t. 63, f. 2. <sup>2</sup>, <sup>3</sup> E. India.

4 6 Masuri.

5, 6 Simla.

<sup>6</sup> Dehra Dun.

6 Khasis.

<sup>6</sup> Dawnat Range.

## approximata, Brunetti.

II, 4743.

Anthrax approximata, Brun., R. I. M., XIII, 74 (1917)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 244<sup>2</sup>.

Anthrax (?) clara var., Brun., R. I. M.,

1, <sup>2</sup> Simla.
Abbottabad.

1, <sup>2</sup> Siliguri.
Pusa.

1, 2, 3 Tenasserim.

1, 2 Khasis.

<sup>1</sup>, <sup>2</sup> Ceylon, E. P.

<sup>&</sup>lt;sup>2</sup>, <sup>3</sup> Europe.

<sup>2, 3</sup> N. & W. Africa.

<sup>&</sup>lt;sup>8</sup> Oceania.

## aureohirta, Brunetti.

Anthrax aureohirta, Brun., R. I. M., III, <sup>1</sup>, <sup>2</sup> Calcutta. 223 (1909)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 252<sup>2</sup>.

## baluchianus, Brunetti.

Anthrax baluchianus, Brun., F. I. Dipt. <sup>1</sup> Baluchistan.
Brachy. I, 250<sup>1</sup> (1920). <sup>1</sup> Kashmir.
<sup>1</sup> Bahist Khal.
<sup>1</sup> Bhittani.

#### clara, Walker.

Anthrax clara, Wlk., Dipt. Saund., (3) 2, 3 E. India.
179 (1852); Wulp, Cat. Dipt. S. Asia, 4, 5 Dehra Dun.
722; Kert., Cat. Dipt., V, 323; Brun., 4, 5 Gahrwal.
R. I. M., II, 452, 4734 [redescr.]; 5 W. Himalaya.
id., F. I. Dipt. Brachy. I, 2435. 5 Khasis.

## clausa, Brunetti.

Anthrax clausa, Brun., R. I. M., II, 454, <sup>1</sup>, <sup>2</sup> L. Burma. 477<sup>1</sup> (1909); id., F. I. Dipt. Brachy. I, 253.

#### dia, Wiedemann.

Anthrax dia, Wd., Anal. Ent., 23 (1824)<sup>1</sup>; <sup>2</sup>, <sup>3</sup>, <sup>4</sup>, <sup>5</sup> Tranquebar. id., Auss. Zweifl. Ins., I, 293; Wulp, Cat. Dipt. S. Asia, 71<sup>2</sup>; Kert., Cat. Dipt., V, 34<sup>3</sup>; Brun., R. I. M., II, 453<sup>4</sup>; id., F. I. Dipt. Brachy. I, 250<sup>5</sup>.

## fletcheri, Brunetti.

Anthrax fletcheri, Brun., F. I. Dipt. <sup>1</sup> Mysore. <sup>1</sup>
Brachy. I, 236 (1920)<sup>1</sup>. Habarane.
Trincomali (White)

#### fuscolimbata, Brunetti.

Anthrax fuscolimbata, Brun., R. I. M., Hangu (N.-W. F. P.). XIII, 75 (1917)<sup>1</sup>; id., F. I. Dipt. <sup>1</sup>, <sup>2</sup> Simla. Brachy. I, 246<sup>2</sup>. <sup>1</sup>, <sup>2</sup> Masuri. <sup>1</sup>, <sup>2</sup> Madras.

## guttatipennis. Brunetti.

Anthrax guttatipennis, Brun., F. I. Dipt. 1 Trincomali. Brachy. I, 237 (1920)1.

## himalayensis, Brunetti.

Anthrax himalayensis, Brun., R. I. M., 1, 2, 3 Naini Tal. III, 222, fig. (1909)1. <sup>2</sup> Simla District. Anthrax himalayanus, Brun., F. I. Dipt. 2 Khasis. Brachy., I, 2382 [lapsus]. Anthrax maura, Brun. [nec. L.], R. I. M., II, 4513.

## hottentota, Linnæus var. claripennis,

#### Brunetti.

Anthrax hottentota var. claripennis, Brun., 1, 2 Naini Tal (plains). R. I. M., II, 452 (1909)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 2472.

## leucopygus, Macquart.

Anthrax leucopyga, Mq., Dipt. Exot., II, 74, t. 21, f. 1 (1842)1; Wulp, Cat. Dipt. S. Asia, 712; Kert., Cat. Dipt., V, 433; Brun., R. I. M., II, 4534. [Omitted from the "Fauna of India" volume.]

<sup>4</sup> Jubbulpore.

<sup>4</sup> Itarsi.

<sup>4</sup> Poona.

4 Allahabad.

2, 3 Timor.

## limpida, Walker.

Anthrax limpida, Wlk., Dipt. Saund., 2, 3, 4, 5 E. India. (3) 179 (1853); Wulp, Cat. Dipt. S. Asia, 722; Kert., Cat. Dipt., V, 443; Brun., R. I. M., II, 4534; id., F. I. Dipt. Brachy. I, 2555.

## lucida, Walker.

Anthrax lucida, Wlk., Dipt. Saund., (3), 179 (1852); Wulp, Cat. Dipt. S. Asia, 722; Kert., Cat. Dipt., V, 443; Brun., R. I. M., II, 4534; id., F. I. Dipt. Brachy. I, 2545.

2, 3, 4, 5 E. India.

#### manifesta. Walker.

Anthrax manifesta, Wlk., Dipt. Saund., I, 178 (1852); Wulp, Cat. Dipt. S. Asia, 722; Kert., Cat. Dipt., V, 453; Brun., R. I. M., II, 453, 4764; id., F. I. Dipt. Brachy. I, 2435.

2, 3, 4 E. India.

4 Masuri.

5 Himalaya. 5 Dehra Dun.

5 Garhwal.

& Khasis.

3 Masuri.

## paniscus, Rossi.

Bibio paniscus, Ross., F. Etrus., II, 256  $(1790)^{1}$ .

3, 4 Simla. 3, 4 Naini Tal.

Anthrax paniscus, Verr., Br. Flies, V, 526; Kert., Cat. Dipt., V, 502; Brun., R. I. M., II, 4523; id., F. I. Dipt. Brachy. I, 2484.

Anthrax bimaculatus, Mq., Suit. à Buff., I, 403 (1834).

Anthrax cingulatus, Mg., Syst. Besch., <sup>2</sup> Europe. II, 145 (1820).

Anthrax hottentotus, Wlk. [nec. L.], List Dipt. B. M., II, 259 (1849).

## referrens. Walker.

Anthrax referrens, Wlk., Dipt. Saund., 2, 3, 4, 5 E. India. (3) 189 (1852); Wulp, Cat. Dipt. S. Asia, 722; Kert., Cat. Dipt., V, 523; Brun., R. I. M., II, 4524; id., F. I. Dipt. Brachy. I, 2555.

## semifuscata, Brunetti.

Anthrax semifuscata, Brun., F. I. Dipt. 1 Trincomali. Brachy., I, 241 (1920)1.

## troglodyta, Fabricius.

Bibio troglodyta, Fb., Syst. Ent., 759 3, 5 E. Indies.  $(1775)^{1}$ .

3, 4 E. India.

Anthrax troglodyta, Wd., Auss. Zweifl. Ins., I, 306; Wulp, Notes Leyd. Mus., VII, 83; id., Cat. Dipt. S. Asia, 712; Meij., Tijd. v. Ent. L, 240; Brun.,

R. I. M., I, 452<sup>3</sup>; id., F. I. Dipt. Brachy. I, 254<sup>4</sup>; Kert., Cat. Dipt., V, 56<sup>5</sup>.

Anthrax kyalina, Wd., Dipt. Exot., I, 141, 34 (1821); id., Auss. Zweifl. Ins., I, 297; Wulp, Tijd. v. Ent., XXIII, 165.

Anthrax lucens, Wlk., Dipt. Saund. 180, (1852).

<sup>2</sup>, <sup>3</sup> Java.
<sup>2</sup> Sumatra.
<sup>3</sup>, <sup>5</sup> Papua.
<sup>5</sup> Ind. Archip.

## 13. Lepidanthrax, Osten-Sacken.

Lepidanthrax, O.-S., Biologia, I, 107 (1886) [Genotype, Anthrax disjuncta, Wd.]; Coq., Trans. Amer. Ent. Soc., XIX, 169; Ald., Cat. N. Amer. Dipt., 227; Brun., F. I. Dipt. Brachy. I, 232.

## compacta, Brunetti.

Lepidanthrax compacta, Brun., F. I. Allahabad. Dipt. Brachy. I, 233 (1920)<sup>1</sup>.

#### transversa, Brunetti.

Lepidanthrax transversa, Brun., F. I. <sup>1</sup> Dehra Dun. Dipt. Brachy. I, 233 (1920)<sup>1</sup>.

## 14. Argyromoeba, Schiner.

Argyromoeba, Sch., Wien. Ent. Monat., IV, 5 (1860) [Genotype, Anthrax tripunctata, Wd.]; id., F. Austr., I, 52; Lw., Besch. Europ. Dipt., I, 228.

Argyramoeba, Lw., Centur., II, 290 [emend.]; Wulp, Cat. Dipt. S. Asia, 73; Kert., Cat. Dipt., V, 59 [Agyramoeba, laps.]; Brun., R. I. M., II, 448, 450; id., F. I. Dipt. Brachy. I, 214.

Spogostylum, Will. [nec. Mq.], Man. N. Amer. Dipt., (2nd edn.), 65, (1896); id., loc. cit., (3rd edn.); 214, Ald., Cat. N. Amer. Dipt., 221.

## argentiapicalis, Brunetti.

Argyramoeba argentiapicalis, Brun., R. <sup>1</sup>, <sup>2</sup> Mahableshwar. I. M., VII, 470, t. 37, f. 6 (1912)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 227, Pl. III, 14<sup>2</sup>.

## bigoti, Brunetti.

Argyramoeba appendiculata, Big. [nec. 1, 2, 3, 4,5 Fondicherry. Mq.], Ann. S. Ent. Fr. (7) II, 347 (1892)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia, 73<sup>2</sup>; Kert., Cat. Dipt., V, 61<sup>3</sup>; Brun., R. I. M., II, 449<sup>4</sup>.

Argyramoeba bigo i, Brun., R. I. Dipt. Brachy. I, 222 (1920)<sup>5</sup>.

## bipunctata, Fabricius.

Anthrax bipunctata, Fb., Syst. Antl., 118 2, 3, 4 Tranquebar. 4, 6 Karachi. (1805)<sup>1</sup>; Wd., Auss. Zweifl. Ins., I, 4, 6 Purneah 286; Wulp, Cat. Dipt. .S. Asia, 712. <sup>5</sup>, <sup>7</sup> E. India. Argyramoeba bipunctata, Kert., Cat. Dipt. V, 623; Brun., R. I. M., II, 4484; <sup>6</sup> Calcutta. <sup>8</sup> Kumaon. t. 12, f. 23; id., F. I. Dipt. Brachy. I, <sup>6</sup> Pusa. Anthrax carbonaria, Wlk., Dipt. Saund., <sup>6</sup> Chapra. 173 (1852); Wulp, Cat. Dipt. S. Asia, <sup>6</sup> Bombay. 72<sup>5</sup>; Kert., Cat. Dipt., V, 31<sup>7</sup>. <sup>6</sup> Assam. <sup>8</sup> Konan Kuppam.

## claripennis, Brunetti.

Argyramoeba claripennis, Brun., R. I. M., <sup>1</sup>, <sup>2</sup> Lahore. III, 218 (1909)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 228<sup>2</sup>.

## distigma, Wiedemann.

Anthrax distigma, Wd. Auss. Zweifl. Ins.,
I, 309 (1828)<sup>1</sup>; Mq., Dipt. Exot., II,
1, 58, 9.
4, 7 Bengal.
Spogostylum distigma, Coq., Proc. U. S.
Nat. Mus., XXI, 318.
4 Matheran.
4 Jullundur.
4 Allahabad.
4 Bombay.

Argyramoeba distigma, Sch., Novara Reise, 122, 14; Wulp, Tijd. v. Ent., XXIII, 166, 19; id., Leyd. Mus. Notes, VII, 83, 38; id., Cat. Dipt. S. Asia, 73<sup>2</sup>; O.-S., Berl. Ent. Zeit., XXVI, 122; Kert., Cat. Dipt., V, 63<sup>3</sup>; Brun., R. I. M., II, 449<sup>4</sup>; id., loc. cit., III, 221<sup>5</sup>; id., Spol. Zeyl., VI, 171<sup>6</sup>; id., F. I. Dipt. Brachy. I, 218, t. 3, f. 10<sup>7</sup>; Meij., Tijd. v. Ent. L, 241 (1907); Howl., Ind. Ins. L., 598; Longst., Butterfly Hunting, 393<sup>8</sup>; Dutt, Pusa Ent. Mem., IV, 212 [notes].

- <sup>5</sup>, <sup>7</sup> Paresnath.
- 5, 7 Naini Tal District.
- 6, 7 Ceylon.
- 7 Hamirpur.
- <sup>7</sup> Madras.
- <sup>7</sup> Utakamund.
- <sup>7</sup> Mettupalaiyam.
- <sup>7</sup> Khasis.
- <sup>7</sup> L. Burma.
- 4, 7 Darjiling.
- <sup>4</sup> Dehra Dun.
- 4, 7 Lucknow. !
- 4, 7 Bangalore.
- 3, 4 Nicobars.

- <sup>2</sup>, <sup>4</sup> Sumatra.
- <sup>2</sup>, <sup>4</sup> Celebes.
- 2, 3, 4 Philippines.
- 2, 3, 4 New Guinea.

## duvaucelii, Macquart.

Anthrax duvaucelii, Mq., Dipt. Exot., II, 63, t. 20, f. 7 (1840)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia, 71<sup>2</sup>; Kert., Cat. Dipt., V, 35<sup>3</sup>; Brun., R. I. M., II, 452<sup>4</sup>.

Argyramoeba duvaucellii, Brun., R. I. M., III, 219<sup>5</sup> [redescr.]; id., F. I. Dipt. Brachy. I, 225<sup>6</sup>.

- 2, 3, 4 Bengal.
- 4, 5, 6 Purneah.
- 4 Cawnpore.
- 4, 3 Chapra.
- 5, 6 Baraich, U. P.
- <sup>6</sup> Kangra Valley.
- 6 Pusa.
- 6 Lahore.
- <sup>6</sup> Murree Hills.

Peshawar.

<sup>6</sup> Allahabad.

### gentilis, Brunetti.

Argyramoeba gentilis Brun. R. I. M., <sup>1</sup>, <sup>2</sup> Laksam. II, 449, 470, t. 12, f. 25 (1909)<sup>1</sup>; id., <sup>1</sup>, <sup>2</sup> Margherita. F. I. Dipt. Brachy. I, 230<sup>2</sup>.

<sup>2, 4</sup> Java.

#### gestroi, Brunetti.

Argyramoeba gestroi, Brun., R. I. M., VII, 470, t. 37, f. 7 (1912)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 222<sup>2</sup>.

<sup>1</sup> Bombay Presidency.

<sup>2</sup> Satara District.

Travancore.

<sup>2</sup> Bangalore.

<sup>2</sup> Chapra.

Pusa.

Peshawar.

## instituta, Walker.

Anthrax instituta, Wlk., Dipt. Saund., <sup>2</sup>, <sup>3</sup>, <sup>4</sup>, <sup>5</sup> E. India. 183 (1852)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia, 72<sup>2</sup>; Kert., Cat. Dipt., V, 42<sup>3</sup>.

Argyramoeba instituta, Brun., R. I. M., II, 450<sup>4</sup>; id., F. I. Dipt. Brachy., I, 227<sup>5</sup>.

## intermedia, Brunetti.

Argyramoeba intermedia, Brun., F. I. <sup>1</sup> Orissa.
Dipt. Brachy., I, 221 (1920)<sup>1</sup>.

<sup>1</sup> Allahabad.

<sup>1</sup> Trincomali.

#### limitarsis. Brunetti.

Argyramoeba limitarsis, Brun., R. I. M., <sup>1</sup>, <sup>2</sup> Garhwal. III, 217 (1909). . . Argyramoeba limitaris, Brun., F. I. Dipt. Brachy. I, 220<sup>2</sup>, [emend.].

#### nigrofemorata, Brunetti.

Argyramoeba nigrofemorata, Brun., R. I. <sup>1</sup>, <sup>2</sup> Garhwal District. M., III, 219 (1909)<sup>1</sup>; id., F. I. Dipt. <sup>1</sup>, <sup>2</sup> Satara District. Brachy. I, 230<sup>2</sup>.

#### niveicauda, Brunetti.

Argyramoeba niveicauda, Brun., F. I. <sup>1</sup> Travancore. Dipt. Brachy. I, 224 (1920)<sup>1</sup>. <sup>1</sup> Calcutta. <sup>1</sup> Sylhet. <sup>1</sup> Chapra.

## niveisquamis, Brunetti.

Argyramoeba neveisquamis, Brun., R. I. <sup>1</sup>, <sup>2</sup> Baluchistan. M., II. 472 (1909)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 229<sup>2</sup>.

## obscurifrons, Brunetti.

Argyramoeba obscurifrons, Brun., R. I. <sup>1</sup>, <sup>2</sup> Simla District.
M., III, 216 (1909)<sup>1</sup>; id., F. I. Dipt.
Brachy. I, 220<sup>2</sup>, t. 3 f. 11.

Bhim Tal.

<sup>2</sup> N. America.

<sup>2</sup> Europe.

## varia, Fabricius.

Anthrax varia, Fb., Ent. Syst., IV, 259 (1794)<sup>1</sup>; id., Syst. Antl., 122; Mg., Syst. Besch., II, 124.

Argyramoeba varia, Sch., F. Austr., I, 54; Kert., Cat. Dipt., V, 68<sup>2</sup>; Brun., R. I. M., II, 450<sup>3</sup>; Coq., Trans. Amer. Ent. Soc., XXI, 96.

Spogostylum varium, Ald., Cat. N. Amer. Dipt., 223.

[Omitted from the "Fauna of India" volume.]

## 15. Spogostylum, Macquart.

Spogostylum, Mq., Dipt. Exot., II, 1, 53 (1841) [Genotype, Sp. mystaceum, Macq.]; Kert., Cat. Dipt., V, 58 [Spongostylum]; Brun., F. I. Dipt. Brachy. I, 213.

#### austeni, Brunetti.

Spogostylum austeni, Brun., F. I. Dipt. <sup>1</sup> Lahore. Brachy. I, 213 (1920)<sup>1</sup>.

## 16. Exoprosopa, Macquart.\*

Exoprosopa, Mq., Dipt. Exot., II, 35, (1840) [Genotype, Bibio capucina, Fb. as

<sup>\*</sup>Whilst this catalogue has been passing through Press a paper by Nurse has appeared (Jo. Bomb. N. H. S. xxviii, 630, tab., June 1922), in which ten new species are described and three Palæarctic species added to the Indian Fauna. Revised key for determination of all described species, pp. 631-632.

pandora, Fb.]; Sch., F. Austr., I, 54; Coq., Can. Ent., XXIV, 123; O.-S., Biologia, I, 77; Will., loc. cit., I, 269; Ald., Cat. N. Amer. Dipt., 225; Wulp, Cat. Dipt. S. Asia, 69; Kert., Cat. Dipt., V, 5; Brun, R. I. M., II, 443, 447, id., F. I. Dipt., Brachy. I, 189.

Argyrospyla, Rond., Dipt. Ital. Prodr., I, 162 (1856).

Argyrospila, Verr., apud Scudd., Nomencl., 32 (1882).

Defilippia, Lioy, Atti. Istit. Veneto, (3) IX, 733 (1864).

Exoptata, (p. p.), Coq., Can. Ent., XIX, 13 (1887).

Hoteralonia, Rond., Arch. Zool. Modena, III, (sep.) 57 (1863).

Litorhynchus, Mq., Dipt. Exot., II, 78 (1840).Trinaria, Muls., Mem. Acad. Lyon. (2) II, 20 (1852).

## albida, Walker.

Anthrax albida, Wlk., Dipt. Saund., I, <sup>1</sup>, <sup>2</sup>, <sup>3</sup>, <sup>4</sup>, <sup>5</sup> E. Indies. 171 (1852)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia, 72<sup>2</sup>.

Exoprosopa albida, Kert., Cat. Dipt., V, 6<sup>3</sup>; Brun., R. I. M., II, 447; id., F. I. Dipt. Brachy. I, 212.

#### alexon, Walker.

Anthrax alexon, Wlk., List Dipt. B. M., 1, 2, 3, 4, 5 E. Indies. II, 246 (1849)1; Wulp, Cat. Dipt. S. Asia, 712.

Exoprosopa alexon, Kert., Cat. Dipt., V,
6<sup>3</sup>; Brun., R. I. M., II, 445<sup>4</sup>; id.,
F. I. Dipt. Brachy., I, 211<sup>5</sup>.

#### annandalei, Brunetti.

Exoprosopa annandalei Brun., R. I. M., <sup>1</sup>, <sup>2</sup> Moulmein. II, 445, 469, t. 12, f. 20 (1909)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 199, t. 3, f. 8.<sup>2</sup>

## auripleura, Walker.

Anthrax auripleura, Wlk., Dipt. Saund., 1, 2, 3, 4, 5 E. Indies. I, 171 (1852)1; Wulp, Cat. Dipt. S. Asia, 722.

Exoprosopa auripleura, Kert., Cat. Dipt., V, 73; Brun., R. I. M., II, 4454; i.d., F. I. Dipt. Brachy. I, 2125.

## basifascia, Walker.

Anthrax basifascia, Wlk., List Dipt. 2, 4 Bengal. B. M., II, 248 (1849)1; Wulp, Cat. 3, 5 N. Bengal. Dipt. S. Asia, 712. Exoprosopa basifascia, Kert., Cat. Dipt.,

V, 73; Brun., R. I. M., II, 4474; id., F. I. Dipt. Brachy. I, 2115.

## bengalensis, Macquart.

Exoprosopa bengalensis, Mq., Dipt. Exot., II, 49, t. 18, f. 4 (1840)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia, 70<sup>2</sup>; Kert., Cat. Dipt., V, 73; Brun., R. I. M., II, 445, t. 12, f. 184; id., F. I. Dipt. Brachy. I, 206, t. 3, f. 5.<sup>5</sup>

<sup>2</sup>, <sup>3</sup>, <sup>4</sup> Bengal. <sup>5</sup> Bellary.

<sup>5</sup> Bellary District. <sup>5</sup> Ceylon, E. P.

## brahma, Schiner.

Exoprosopa brahma, Sch., Novara Reise, 2, 3, 4, 5 Ceylon. 118 (1868)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia, 712; Kert., Cat. Dipt., V, 83; Brun., R. I. M., II, 446, t. 12, f. 224; id., F. I. Dipt. Brachy. I, 206, t. 3, f. 65.

#### flammea. Brunetti.

Exoprosopa flammea, Brun., R. I. M., 1, 3 Pusa. II, 444, 466 (1909)<sup>1</sup>; id., Spol. Zeyl., <sup>2</sup> Ceylon. VI, 1712; id., F. I. Dipt. Brachy. I, 1 Trivandrum. 1933; Howl., Ind. Ins. L., t. 63, f. 3 Trincomali. (1909).

#### flavipennis, Brunetti.

Exoprosopa flavipennis, Brun., R. I. M., 1, 2 Pusa. II, 444, 465 (1909)<sup>1</sup>; id., F. I. Dipt. Brachy. I, 1922.

## insulata, Walker.

Anthrax insulata, Wlk., Dipt. Saund., 172 (1852)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia, 72<sup>2</sup>; Brun., R. I. M., III, 222<sup>3</sup>.

Exoprosopa insulata, Kert., Cat. Dipt.,
V, 14<sup>4</sup>; Brun., R. I. M., II, 446, t. 12,
f. 21<sup>5</sup>; id., F. I. Dipt. Brachy. I, 203,
t. 3, f. 4.

Exoprosopa octonotata, Big., nom. nud.

<sup>2</sup>, <sup>4</sup>, <sup>5</sup> E. India.

3, 5, 6 Nepal Terai.

3, 6 Gonda, U. P.

Simla.

<sup>5</sup> Masuri.

<sup>6</sup> Dehra Dun.

<sup>6</sup> Naini Tal.

" Allahabad.

Belgachia.

<sup>6</sup> Bhandhara, C. P.

<sup>6</sup> Madhupur.

Chitorgarh.

Surat.

<sup>8</sup> N. Kanara.

<sup>6</sup> Utakamand.

E Ceylon.

<sup>6</sup> N. Khasis.

<sup>6</sup> L. Burma.

#### lar, Fabricius.

Bibio lar, Fb., Spec. Ins., II, 414 (1781)<sup>1</sup>.

Anthrax lar, Fb., Syst. Antl., 110; id.,
Ent. Syst., IV, 257, 4; Wd., Auss.
Zweifl. Ins., I, 268.

Exoprosopa lar, Wulp, Cat. Dipt. S. Asia, 70<sup>2</sup>; Kert., Cat. Dipt., V, 15<sup>3</sup>; Brun., R. I. M., II, 443, 444<sup>4</sup>; id., F. I. Dipt. Brachy. I, 194-7, t. 3, f. 1<sup>5</sup>.

Exoprosopa binotata, Mq., Dipt. Exot., Supp. 5, 69, 66 (1855); Wulp, Cat. Dipt. S. Asia, 708; Kert., Cat. Dipt., V, 8<sup>12</sup>.

\*Anthrax collaris, Wd., Auss. Zweifl. Ins., I, 271 (1828); Wlk., List Dipt. B. M., II, 247; Wulp, Cat. Dipt. S. Asia, 716.

Litorhynchus collaris, Mq., Dipt. Exot., I, 1, 80.

<sup>2</sup>, <sup>3</sup>, <sup>4</sup> Bengal.

<sup>4</sup> Bombay.

<sup>5</sup> United Provinces.

<sup>5</sup> Central Provinces,

<sup>7</sup> Central India.

<sup>6</sup>, <sup>7</sup> Madras.

5, 5 Kangra Valley.

<sup>5</sup>, <sup>9</sup> Sikkim.

<sup>5</sup>, <sup>10</sup> Ceylon, E. P.

<sup>5</sup>, <sup>7</sup> Mysore.

<sup>5</sup>, <sup>7</sup> Travancore.

<sup>8</sup> E. India.

<sup>†</sup>Nurse  $(Bmb.\ Jo.,\ xxviii,\ 630)$  now regards this species as distinct, placing it and tar in Litorhynehus as a valid genus.

<sup>11</sup> Australia. Exoprosopa collaris, Kert., Cat. Dipt., V, 911; Brun., R. I. M., II, 444, t. 12, f. 167; id., loc. cit., III, 2169; id., Spol. Zeyl., VI, 17110. Anthrax ruficollis, Saund., T. Ent. Soc. Lon., III, 59, Pl. V, 5, (1841).

## lateralis, Brunetti.

Exoprosopa lateralis, Brun., R. I. M., 1, 2 Calcutta. II, 445, 467-8, t. 12, f. 7<sup>1</sup> (1909); id., <sup>2</sup> N. Kanara. F. I. Dipt. Brachy. I, 198, t. 3, f. 72.

## latipennis, Brunetti.

Exoprosopa latipennis, Brun., R. I. M., 1, 2 Shillong. II, 444, 464-5 (1909)<sup>1</sup>; id., F. I. Dipt. <sup>2</sup> Khasis. Brachy. I, 1982.

## maculiventris, Brunetti.

Exoprosopa maculiventris, Brun., F. I. Garhwal. Dipt. Brachy. I, 200 (1920)1.

## niveiventris, Brunetti.

Exoprosopa niveiventris, Brun., R. I. M., 1, 2 Paresnath. III, 214-216 (1909)<sup>1</sup>; id., F. I. Dipt. <sup>2</sup> S. Coorg. <sup>2</sup> Ceylon, E. P. Brachy. I, 2072.

## pennipes, Wiedemann.

Anthrax pennipes, Wd., Dipt. Exot., I, 4 5 Karachi. 129 (1821)1; id., Auss. Zweifl. Ins., I, 4, 5 Assam. 4, 5 Pusa. Hyperalonia pennipes, Rend., Ann. Mus. <sup>3</sup> Madras. Genoa, VII, 452.

Exoprosopa pennipes, Mq., Dipt. Exot., II, 1, 49; Wulp, Cat. Dipt. S. Asia, <sup>3</sup> Java. 702; Kert., Cat. Dipt., V, 193; Brun., R. I. M., II, 4433; id., F. I. Dipt. Brachy. I 1975.

2, 3, 4 Borneo.

<sup>3</sup> Oceania.

<sup>2</sup> ?Cape of Good Hope-

## puerula, Brunetti.

Exoprosopa puerula Brun., F. I. Dipt. 1 Madras. Brachy. I, 205, t. 3, f. 9 (1920)<sup>1</sup>.

## semilucida, Walker.

Anthrax semilucida Wlk. Dipt. Saund. 1, 8 3 4, 5 E. Indies. III, 170 (1852)1; Wulp, Cat. Dipt., S. Asia, 722.

Exoprosopa semilucida Kert., Cat. Dipt., V, 213; Brun., R. I. M., II, 4474; id., F. I. Dipt. Brachy. I; 2125.

### stylata, Brunetti.

Exoprosopa stylata Brun., F. I. Dipt. Bellary District. Brachy. I, 201 (1920)1.

#### vitrea, Bigot.

Exoprosopa vitrea Big., Ann. Soc., Ent. Fr., LXI, 344 (1892)1; Wulp, Cat. Dipt. S. Asia, 712; Kert., Cat. Dipt. V, 243; Brun., R. I. M., II, 4474; id. loc. cit., VII, 467-8, t. 37, f. 55; id. F. I. Dipt. Brachy. I, 210.

<sup>2</sup>, <sup>3</sup>, <sup>4</sup> Pondicherry. <sup>5</sup>, <sup>6</sup> Satara District. <sup>6</sup> W. Ghats. Mohanpur (Bengal).

### vitripennis, Brunetti.

Exoprosopa vitripennis, Brun. R. I. M., 1 2 Mahableshwar. VII, 467-9 (1912)<sup>1</sup>; id., F. I. Dipt. <sup>2</sup> Ceylon E. P. Brachy. I, 2102.

## 17. Hyperalonia, Rondani.

Hyperalonia, Rond., Arch. Zool. Modena, III, 1, (1864) [Genotype, Stomoxys morio, Fb., (Anthrax erythrocephalus, Fb.]; O.-S., Biologia, I, 89, [revised chars.]; Ald., Cat. N. Amer. Dipt., 224; Brun., R. I. M., II, 438, 442; id., F. I. Dipt. Brachy. I, 178; Kert., Cat. Dipt., V, I, Will. Biologia, I, 273 [notes].

Velocia, Coq., Can. Ent., XVIII, 158 (1886).

#### aurantiaca, Guerin.

Anthrax aurantiaca, Guer., Icon. Regne 2, 3, 4, 5 Bengal, Anim., III, (Ins.) 539, t. 95, f. 6 Chapra.  $(?1843)^{1}$ .

Exoprosopa aurantiaca, Wulp, Dipt. S. Asia, 702; Kert., Cat. Dipt., V. 73.

Hyperalonia aurantiaca, Brun., R. I. M., II, 440, 460 [redescr.]<sup>4</sup>; id., F. I. Dipt. Brachy. I, 1865.

## chrysolampis, Jaennicke.

Exoprosopa chrysolampis, Jaen., Abh. Senck. Nat. Ges., VI, 344, t. 43, f. 8 (1867)<sup>1</sup>; O.-S., Ann. Mus. Gen., XVI, 433; Wulp, Cat. Dipt. S. Asia, 702.

Hyperalonia chrysolampis, Kert., Cat. Dipt., V, 23; Brun., R. I. M., II, 4394; id., F. I. Dipt. Brachy. I, 1825.

4. 5 Sikkim. 4, 5 Bhim Tal.

2, 3, 4, 5 Java.

2, 3, 4, 5 Moluccas.

4, 5 Borneo.

## dives. Walker.

Anthrax dives, Wlk., List Dipt. B. M., 2, 3, 4, 5 Sylhet. II, 40 (1849)<sup>1</sup>; Wulp, Cat. Dipt. S. Asia, 71<sup>2</sup>.

Exoprosopa dives, Kert. Cat. Dipt., V,  $10^{3}$ .

Hyperalonia dives, Brun., R. I. M., II, 4394; id., F. I. Dipt. Brachy. I, 180.

## flaviventris, Doleschall.

Anthrax flaviventris, Dol., Nat. Tijd. Ned. Ind., XIV, 400,  $(1857)^{T}$ ;

Exoprosopa flaviventris, Wulp, Cat. Dipt. S. Asia, 70<sup>2</sup>; Kert., Cat. Dipt.,  $V, 12^3.$ 

Hyperalonia flaviventris, O.-S., Berl. Ent. Zeit., XXVI, 112; Brun., R. I. M., II, 4414; id., F. I. Dipt. Brachy. I, 183.

<sup>4</sup> <sup>5</sup> Tenassarim.

4 5 Trivandrum. Coorg.

2, 3, 4, 5 Amboina. <sup>3</sup> Philippines.

#### oenomaus, Rondani.

Hyperalonia oenemaus, Rond., Ann. Mus. Gen., VII, 453 (1875)<sup>1</sup>; Brun., R. I. M., II, 4422; id., F. I. Dipt. Brachy. I,  $185^3$ .

<sup>3</sup> Darjiling District.

<sup>3</sup> Sikkim.

3 Mergui.

3 Sadiya.

Shillong.

Exoprosopa oenomaus, O.-S., Berl. Ent. Zeit., XXVI, 112; Wulp, Cat. Dipt. S. Asia, 714.

2, 3, 4 Borneo. 2, 3, 4 Philippines.

## semifuscata, Brunetti.

Hyperalonia semifuscata, Brun., R. I. M., 1, 2 Mahableshwar. VII, 466, t. 37, f. 4 (1912)<sup>1</sup>; id., F. I. Dipt. Brachy., I, 1882.

## sphinx. Fabricius.

Bibio sphinx, Fb. Mantissa, II, 329, 20  $(1787)^{1}$ .

Anthrax sphinx, Fb. Syst. Antl., 126; Wd., Auss. Zweifl. Ins., I, 258; Mq., Dipt. Exot., II, L, 37.

Exoprosopa sphinx, Wulp, Cat. Dipt. S. Asia, 70<sup>2</sup>; Kert., Cat. Dipt., V, 22<sup>3</sup>.

Hyperalonia sphinx, Brun., R. I. M., II, 4404; id., F. I. Dipt. Brachy. I, 1875; Howl., Ind. Ins. L., 600 [parasite of Sceliphron]; Dutt, Pusa Ent. Mem., IV, 210, fig. 8 [pupa], fig. 9 [bionomics]. 2, 3 E. India.

4, 5 Trivandrum.

4, 5 Bombay.

<sup>5</sup> Orissa.

<sup>5</sup> Chapra.

<sup>5</sup> Coimbatore.

4, 5 Cevlon.

## suffusipennis, Brunetti.

Hyperalonia suffusipennis, Brun., R. I. M., II, 462, t. 12, f. 15 (1909)<sup>1</sup>; id., F. I. Dipt. Brachy I, 188, t. 3, f. 12.

1, 2 Purneah. <sup>2</sup> Naini Tal. Dehra Dun. <sup>2</sup> Coorg. Tranquebar.

### tantalus, Fabricius.

Anthrax tantalus, Fb., Ent. Syst., IV, 260 (1794)<sup>1</sup>; Wd. Auss. Zweifl. Ins., I, 255, 4; Mq., H. N. Dipt., I, 401; Kirby., A. M. N. H., 1884, 458.

Exoprosopa tantalus, Mq., Dipt. Exot., I, L, 37; Kert., Cat. Pal. Dipt., II, 1694; Meij., Tijd. v. Ent., L, 239; Wulp, Cat. Dipt. S. Asia, 702.

Hyperalonia tantalus, Rond., Ann. Mus. Gen., VII, 453; Brun., R. I. M., II, 2, 3, 8 Hindostan.

3, 5 Tranquebar.

<sup>3</sup>, <sup>5</sup> Sikkim.

3, 5 Nepal.

3 5 Assam.

3, 5 Tennaserim.

<sup>5</sup> Naini Tal District.

<sup>9</sup> Ceylon.

<sup>2</sup>, <sup>3</sup>, <sup>5</sup> Java.

438<sup>3</sup>; *id.*, F. I. Dipt. Brachy., I, 181<sup>5</sup>; Kert., Cat. Dipt., V, 4 <sup>8</sup>; Longstaff, Butterfly Hunting, 372<sup>9</sup>.

Anthrax caeruleopennis, Dol., Nat. Tijd. Ned. Ind., XIV, 400, t. 9, f. 2<sup>6</sup> (1857). Exoprosopa caeruleopennis, O.-S., Ann. Mus. Gen., XVI, 433; Wulp, Cat.

Dipt. S. Asia, 70<sup>7</sup>.

Hyperalonia hyx, Big., nom. nud.

, 3, 5 Borneo..

<sup>2</sup>, <sup>3</sup>, <sup>5</sup> Celebes.

<sup>2</sup>, <sup>3</sup>, <sup>5</sup>, <sup>8</sup> China. <sup>3</sup>, <sup>5</sup>, <sup>8</sup> Papua.

3, 5 Sumatra.

3, 4, 5, 8 Japan. 6, 7 Amboina:

<sup>8</sup> Malay Archipelago.

## tristis, van der Wulp.

Exoprosopa tristis, Wulp, Tijd. v. Ent., XI, 107, t. 3, f. 11 (1868)<sup>1</sup>; id., Cat. Dipt. S. Asia, 71<sup>2</sup>; Kert., Cat. Dipt., V, 23<sup>3</sup>.

Hyperalonia tristis, Brun., R. I. M., II, 4394; id., F. I. Dipt. Brachy. I, 1805.

<sup>4</sup>, <sup>5</sup> Tenmalai (Travancore).

2, 3, 4 Timor.

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